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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,200	10/16/2003	Liliana Arcidiacono	856063.654D1	7156

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EXAMINER	
VOELTZ, EMANUEL T	

ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/687,200	ARCIDIACONO ET AL.
	Examiner	Art Unit
	Emanuel T. Voeltz	2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/595,759.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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Examiner's Detailed Office Action

This action is in response to patent application number 10/687,200, filed October 16, 2003.

Claims 1-22 have been examined.

Double Patenting

Statuatory

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 15-22 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 5-12 of prior U.S. Patent No. 6,668,199 B1, granted to Arcidiacono et al. This is a double patenting rejection.

Non-Statuatory

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-14 are rejected under the judicially created doctrine of double patenting over claim1-12 of U. S. Patent No. 6,668,199 B1, granted to Arcidiacono et al. since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

Regarding claim 1,

A control unit for electronic microcontrollers or microprocessors that include a finite state machine having at least one combinatorial network, wherein the finite state machine comprises: a plurality of control subunits, each control subunit corresponding to the at least one combinatorial logic network, each of the plurality of control subunits independently connected to an arbitration block to provide information about a possible future state and to receive a present state command (see combination of claim 1 and claim 5 of '199 patent).

Furthermore, the only difference between the instant claims and those from the '199 patent are that the '199 is subject to a method of manufacturing and the instant claims are subject to an control unit (i.e. apparatus). It would be obvious to one of ordinary skill in the art at the

time of the invention to show that the method of fabricating would essentially lead to an apparatus, such as a control unit. Therefore, if upon completion of the method of fabrication would result in an apparatus as is being claimed in the instant application.

Regarding claim 2,

The control unit according to claim 1 wherein each control subunit is structurally and functionally independent of the other control subunits (see claim 2 of '199 patent).

Regarding claim 3,

The control unit according to claim 1 wherein each control subunit supplies the arbitration block with a predetermined value representing one of either a predetermined state of operation and a neutral state (see claim 3 of '199 patent).

Regarding claim 4,

The control unit according to claim 1 wherein each control subunit proposes, based on a type of instruction to be executed, a possible state of its own to the arbitration block, and wherein only one of the plurality of control subunits will be in an active state, while the others in the plurality of control subunits are in a neutral state (see claim 4 of '199 patent).

Regarding claim 5,

A method of designing a control unit that includes a microcontroller, the method comprising: creating a functional description of an arbitration block structured to accept a plurality of inputs; and creating a functional description of a plurality of individual control blocks, each control block having a first output coupled to a respective one of the plurality of inputs of the arbitration block, and each control block having an input structured to accept a current state of the arbitration block (see claim 1 of '199 patent).

Furthermore, the only difference between the instant claims and those from the '199 patent are that the '199 is subject to a method of manufacturing and the instant claims are subject to a method of designing. It would have been obvious to one of ordinary skill in the art at the time of the invention that if the instant claims are already leading to the method of manufacturing a control unit that one would clearly understand that before you begin manufacturing a design of what you are going to manufacture must be dealt with otherwise you might not get what you want when it comes time to manufacture the apparatus.

Regarding claim 6,

The method of claim 5 wherein each of the plurality of individual control blocks also has a second output, the method further comprising: creating a functional description of a collection block structured to accept a plurality of inputs structured to receive a respective signal from the second output of the plurality of individual control blocks, and the collection block structured to select one of the inputs as an output signal of the control unit (see claim 6 of '199 patent).

Regarding claim 7,

The method of claim 5 wherein the control unit includes a finite state machine, and wherein the output of each of the plurality of control blocks is a proposed state (see claim 7 of '199 patent).

Regarding claim 8,

The method of claim 5 wherein the output of each of the plurality of the individual control blocks does not directly couple to any of the other control blocks in the plurality of individual control blocks (see claim 8 of '199 patent).

Regarding claim 9,

The method of claim 8 wherein each of the plurality of the individual control blocks is structured to receive the same current state of the arbitration block at the same time (see claim 9 of '199 patent).

Regarding claim 10

The method of claim 5 wherein creating a functional description of a plurality of individual control blocks comprises describing the functions of the plurality of individual control blocks in a hardware description language (see claim 10 of '199 patent).

Regarding claim 11,

The method of claim 10 wherein describing the functions of the plurality of individual control blocks in a hardware description language comprises creating listing files in VHDL (see claim 11 of '199 patent).

Regarding claim 12,

The method of claim 5 wherein each of the plurality of individual control blocks represents a separate class of instructions (see claim 12 of '199 patent).

Regarding claim 13,

The method of claim 5 wherein each of the plurality of individual control blocks represents a separate class of operations (see claim 12 of '199 patent).

Regarding claim 14,

The method of claim 5 wherein the control unit includes a microprocessor in place of the microcontroller (see claim 1 of '199 patent).

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application

which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Correspondence Information

Any inquiries concerning this communication or earlier communications from the examiner should be directed to **Emanuel Todd Voeltz** who may be reached via telephone at **(703) 305-4563**. The examiner can normally be reached Monday through Friday between the hours of 8:00 a.m. and 5:00 p.m. eastern standard time.

If you need to send an Official facsimile transmission, please send it to **(703) 872-9306**. If you would like to send a Non-Official (draft) facsimile transmission the fax is **(703) 746-5104**. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, **Anthony Knight**, may be reached at **(703) 308-3179**.

Any response to this office action should be mailed too: **Director of Patents and Trademarks Washington, D.C. 20231**.

Moreover, hand-delivered responses should be delivered to the Receptionist, located on the **fourth floor of Crystal Park 11, 2121 Crystal Drive Arlington, Virginia**.

Emanuel Todd Voeltz
Primary Patent Examiner
Art Unit 2121
United States Department of Commerce
Patent & Trademark Office

EMANUEL TODD VOELTZ
PRIMARY EXAMINER